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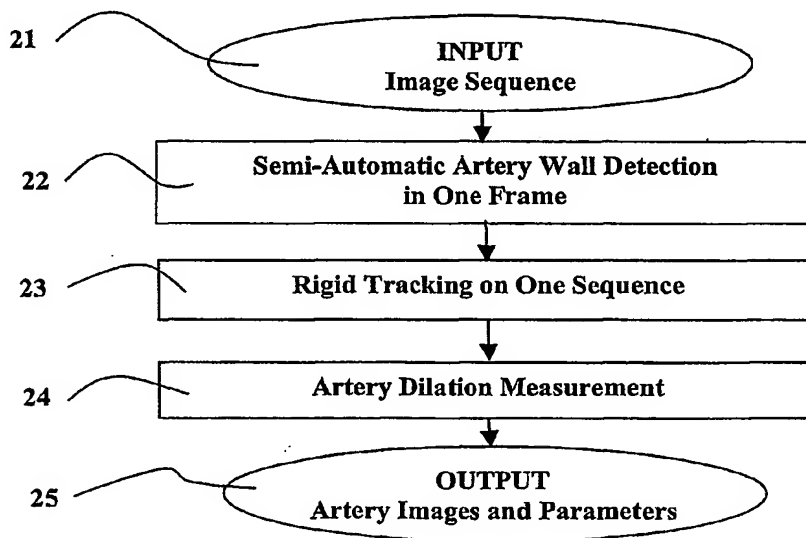
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(54) Title: **ULTRASONIC APPARATUS FOR ESTIMATING ARTERY PARAMETERS**



(57) **Abstract:** The invention relates to an ultrasonic image processing system, for processing images in an image sequence representing a segment of artery explored along its longitudinal axis, said artery segment showing moving walls; this system comprising: acquisition means (21) for acquiring an ultrasonic image sequence of a segment of artery explored along its longitudinal axis and having walls moving in relation with the cardiac cycle; semi-automatic detection means (22) for detecting the artery walls in an image of the sequence; automatic rigid tracking means (23) for tracking the corresponding artery walls in other images of the sequence; evaluation means (24) for evaluating the artery wall motion and distensibility; and viewing means (154) for visualizing images. The invention further relates to an ultrasound examination apparatus having a curved array of transducer elements and coupled to this system, having viewing means to visualize the images.

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